

### DETAILED ACTION

1. This communication is a first Office Action Non-Final rejection on the merits.

Claims 1-13 are currently pending and have been considered below.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. **Claim 1-13 are rejected under 35 U.S.C. 112, second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Claim 1** states in the preamble: "A system for assisting running management of a plurality of carrier vehicles which carry predetermined material goods to a predetermined destination..." There is no transition phrase after the preamble, such as "comprising," or "consisting," or "consisting essentially of." Without the transition phrase after the preamble, the claim is does not particularly point out and distinctly claim the subject matter which the applicant regards as his invention.

**Regarding claim 8**, the word "means" is preceded by the word(s) "outputting" in an attempt to use a "means" clause to recite a claim element as a means for performing a specified function. However, since no function is specified by the word(s) preceding "means," it is impossible to determine the equivalents of the element, as required by 35 U.S.C. 112, sixth paragraph. See *Ex parte Klumb*, 159 USPQ 694 (Bd. App. 1967).

**Regarding claim 10**, the word "means" is preceded by the word(s) "said items of information transmitted from said transmitting" in an attempt to use a "means" clause to recite a claim element as a means for performing a specified function. However, since no function is specified by the word(s) preceding "means," it is impossible to determine the equivalents of the element, as required by 35 U.S.C. 112, sixth paragraph. See *Ex parte Klumb*, 159 USPQ 694 (Bd. App. 1967).

**Claim 11** recites the limitation "transmitting means mounted on said vehicle, for transmitting said position information, time information, warning time information, vehicle specifying information and loadage to said business place through a communication network including a wireless line" in the last paragraph of the claim. There is no antecedent basis for the "warning time information" limitation or the "business place" limitation. These limitations are mentioned in other claims, but Claim 11 is an independent claim with no prior mention of a warning time limitation or business place limitation.

**Claim 12** recites the limitation "warning time information acquiring means for acquiring warning time information which is a time when said remaining level warning information" in the third paragraph of the claim. This sentence is unclear as to the "said remaining level warning information." The claim is generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

**Claim 13** states in the preamble: "A system for assisting running management of a plurality of carrier vehicles which carry predetermined material goods to a

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predetermined destination..." There is no transition phrase after the preamble, such as "comprising," or "consisting," or "consisting essentially of." Without the transition phrase after the preamble, the claim does not particularly point out and distinctly claim the subject matter which the applicant regards as his invention.

**Claims 2-7** depend from claim 1, and therefore carry the same deficiencies.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. **Claims 1 and 11, as best understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Hsiao et al. (Pub. No. 2003/0233189).**

**As per claim 1**, as best understood, Hsiao et al. discloses a system for assisting running management of a plurality of carrier vehicles (abstract; disclosing a "position tracking system for a plurality of mobile trailers") which carry predetermined material goods to a predetermined destination, comprising:

position information acquiring means mounted on said carrier vehicle, for acquiring one's own vehicle position information on the basis of a GPS signal (paragraph 33; disclosing a "mobile terminal unit" in place on tractor-trailers which "contains a GPS receiver, also referred to as a navigation system);

time information acquiring means mounted on said carrier vehicle, for acquiring time information corresponding to said position information (paragraphs 68 and 72-73; disclosing a system including "position-reporting subsystems of the tractors" that can acquire and provide "real-time" "data messages" including specific times at which the tractors were involved in various tasks at certain locations);

vehicle specifying information storing means mounted on said carrier vehicle, for storing vehicle specifying information used to specify one's own vehicle (abstract, paragraph 57; disclosing a "unique electronic identifier" for each vehicle in a plurality of vehicles);

vehicle specifying information acquiring means mounted on said carrier vehicle, for acquiring the vehicle specifying information from said vehicle specifying storing means (abstract, paragraph 57; disclosing "an electronic identifier reader for acquiring the electronic identification of a trailer");

loadage measuring means for measuring loadage of the material goods loaded on the carrier vehicle on the basis of load detected by a load sensor attached to a predetermined position of said carrier vehicle (paragraph 48; disclosing a system that includes "sensors that are mounted on the trailer body" that can be utilized to determine "the weight of the cargo" loaded in the carrier);

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transmitting means mounted on said carrier vehicle, for transmitting said position information, time information, vehicle specifying information and loadage to a business place through a communication network inclusive of a wireless line (paragraphs 68 and 400 ; disclosing a system where "position reporting subsystems" transmit data messages including position and other messages including time, vehicle information, and weight of cargo);

receiving means installed on said business place to which the carrier vehicle belongs, for receiving said position information, time information, vehicle specifying information and loadage through said communication network (paragraph 40; teaching a "position-receiving subsystem which receives signals" contained aforementioned data such as time, vehicle information, and weight of cargo);

and outputting means installed on said business place, for outputting said position information, time information, vehicle specifying information and loadage (paragraph 29; disclosing a computer system "located at a centralized office" capable of outputting data to a user interface and "a remote communications network through a network interface").

**As per claim 11**, as best understood, Hsiao et al. discloses a communication terminal device installed on a carrier vehicle (abstract; disclosing a "tracking system for a plurality of trailers" including a "position-reporting subsystem" attached to the carrier vehicle"), comprising:

position information acquiring means mounted on said carrier vehicle, for acquiring one's own position information on the basis of a GPS signal (paragraph 33;

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disclosing a "mobile terminal unit" in place on tractor-trailers which "contains a GPS receiver, also referred to as a navigation system);

time information acquiring means for acquiring time information corresponding to said position information (paragraphs 68 and 72-73; disclosing a system including "position-reporting subsystems of the tractors" that can acquire and provide "real-time" "data messages" including specific times at which the tractors were involved in various tasks at certain locations);

vehicle specifying information storing means storing means for storing vehicle specifying information used to specify one's own vehicle (abstract, paragraph 57; disclosing a "unique electronic identifier" for each vehicle in a plurality of vehicles);

vehicle specifying information acquiring means for acquiring the vehicle specifying information from said vehicle specifying information storing means (abstract, paragraph 57; disclosing "an electronic identifier reader for acquiring the electronic identification of a trailer");

loadage measuring means for measuring loadage of the material goods carried on one's own vehicle on the basis of a load detected by a load sensor attached to a predetermined position of one's own vehicle (paragraph 48; disclosing a system that includes "sensors that are mounted on the trailer body" that can be utilized to determine "the weight of the cargo" loaded in the carrier);

transmitting means mounted on said carrier vehicle, for transmitting said position information, time information, warning time information, vehicle specifying information and loadage to said business place through a communication network including a

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wireless line (paragraphs 68 and 400 ; disclosing a system where "position reporting subsystems" transmit data messages including position and other messages including time, vehicle information, and weight of cargo).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 2, 3, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsiao et al. in view of Tyhy et al. (Patent #5,393,936).**

**As per claim 2**, Hsiao discloses the claimed invention as described in claim 1, but fails to disclose a system wherein the said carrier vehicle is a tank lorry vehicle for carrying liquefied gas.

Tyhy et al. teaches an on-board weighing system for a vehicle including an embodiment wherein the said carrier vehicle is a tank lorry vehicle for carrying liquefied natural gas (column 2, lines 4-14; teaching a system that includes vehicular tank storage for Anhydrous Ammonia, a "liquefied gas commonly used a fertilizer").

From this teaching of Tyhy et al., it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the mobile-trailer

tracking system of Hsiao et al. with the tank lorry embodiment of Tyhy et al. in order to give mobile carriers more options in freightage.

**As per claim 3**, Hsiao et al. further teaches a system further comprising a delivery quantity computing means mounted on the vehicle to be incorporated in data transmission and data receiving means (paragraph 48; disclosing a system that includes “sensors that are mounted on the trailer body” that can be utilized to determine “the weight of the cargo” loaded in the carrier).

**As per claim 4**, Hsiao et al. further teaches a system including an outputting means capable of outputting a loss quantity of liquefied gas lost during carrying of the liquefied gas (paragraph 48, disclosing a system that includes “sensors that are mounted on the trailer body” that can be utilized to determine “the weight of the cargo” loaded in the carrier; and paragraph 80, describing how “by using linked records or the log file of the mobile-trailer database” users can request report detailing all aspects of measurements over time, to include the weight of cargo and cargo loss. The claim describes a system that can be used to measure loss of any load, including liquefied gas or any other loadage. The system described by Hsiao et al. is the functional equivalent to this claim).

8. **Claims 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsiao et al. and Tyhy et al. as applied to claims 2-4 above, in further view of Dalrymple et al. (Patent # 5,305, 237).**

**As per claim 5**, the Hsiao et al. and Tyhy et al. combination discloses the claimed invention, but fail to teach a system further comprising a delivery statement



issuing means mounted on said tank lorry vehicle, for issuing a delivery statement for a user supplied with said liquefied gas on the basis of said delivery quantity.

Dalrymple et al. teaches a system for monitoring a liquid material in a transportable material which includes a delivery statement issuing means (column 7, lines 39-42; teaching a system that includes an apparatus to “generate bills of lading, invoices, inventory management reports, or other desired documents”).

From this teaching of Dalrymple et al., it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the liquefied gas vehicle measurement system of Hsiao et al. and Tyhy et al. with the delivery statement issuing means of Dalrymple et al, in order to provide an efficient means to generate delivery statements.

**As per claim 6**, the Hsiao et al. and Tyhy et al. combination discloses the claimed invention, as described in claim 3, and Hsiao et al. further teaches a system further comprising: running history information saving means installed on said business place, for saving, as running history information, said position information, time information, vehicle specifying information, loadage and delivery quantity (paragraph 80, describing how “by using linked records or the log file of the mobile-trailer database” stored in the on-site database, users can request report detailing all aspects of all measurements over time, to include position, time, vehicle identification and specification, and freightage and delivery quantities).

However, the Hsiao et al. and Tyhy et al. combination does not teach a bill issuing means installed on said business place, for creating/issuing a bill for said user supplied with the liquefied gas on the basis of said running history information.

Dalrymple et al. teaches a plant control system which generates a bill issuing means installed on a business place, for creating/issuing a bill for said user supplied with the liquefied gas (column 7, lines 39-42; teaching a system that includes an apparatus to "generate bills of lading, invoices, inventory management reports, or other desired documents").

From this teaching of Dalrymple et al., it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the liquefied gas vehicle measurement system of Hsiao et al. and Tyhy et al. with a bill issuing means of Dalrymple et al. in order to provide an efficient means to generate billing statements.

**As per claim 7**, the Hsiao et al. and Tyhy et al. combination teaches the claimed invention, as described in claim 3, and Hsiao et al. further teaches a system further comprising: running history information saving means installed on said business place, for saving, as running history information, said position information, time information, vehicle specifying information, loadage and delivery quantity (paragraph 80, describing how "by using linked records or the log file of the mobile-trailer database" stored in the on-site database, users can request report detailing all aspects of all measurements over time, to include position, time, vehicle identification and specification, and freightage and delivery quantities).

However, the Hsiao et al. and Tyhy et al. combination does not teach a bill issuing means installed on said business place, for creating a bill for said user supplied with the liquefied gas on the basis of said running history information.

Dalrymple et al. teaches a plant control system which generates a report issuing means installed on a business place, for creating and issuing a bill for said user supplied with the liquefied gas (column 7, lines 39-42; teaching a system that includes an apparatus to "generate bills of lading, invoices, inventory management reports, or other desired documents").

From this teaching of Dalrymple et al., it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the liquefied gas vehicle measurement system of Hsiao et al. and Tyhy et al. with a report issuing means of Dalrymple et al, in order to provide an efficient means to generate billing statements.

**As per claim 8**, as best understood, the Hsiao et al. and Tyhy et al. combination teaches the claimed invention, as described in claim 3, and Hsiao et al. further teaches a system further comprising: running history information saving means installed on said business place, for saving, as running history information, said position information, time information, vehicle specifying information, loadage and delivery quantity (paragraph 80, describing how "by using linked records or the log file of the mobile-trailer database" stored in the on-site database, users can request report detailing all aspects of all measurements over time, to include position, time, vehicle identification and specification, and freightage and delivery quantities).

The Hsiao et al. and Tyhy et al. combination does not teach an outputting means installed on said business place, wherein said outputting means is capable of outputting said running history information superposed on a map image of a related district.

Dalrymple et al. teaches a plant control system which generates a report issuing means installed on a business place, wherein said outputting means is capable of outputting said running history information superposed on a map image of a related district (column 7, lines 39-42; teaching a system that includes an apparatus to “generate bills of lading, invoices, inventory management reports, or other desired documents” which includes functionality to include items such as superimposed maps).

From this teaching of Dalrymple et al., it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the liquefied gas vehicle measurement system of Hsiao et al. and Tyhy et al. with a document issuing means of Dalrymple et al., in order to provide an efficient means to generate accurate usage data.

**As per claim 9**, the Hsiao et al. and Tyhy et al. combination teaches the claimed invention, as described in claim 2, and Hsiao et al. further teaches:

tank position information acquiring means attached to said tank, for acquiring tank position information of one's own tank on the basis of the GPS signal (paragraphs 27-28; teaching a system wherein each trailer has an attached RFID tag to transmit the electronic signature via GPS signals);

tank specifying information storing means attached to said tank, for specifying tank specifying information used to specify one's own tank (paragraph 27; teaching a

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system wherein “each of the trailers contains an RFID tag providing a unique electronic identifier of the trailer);

tank specifying information acquiring means attached to said tank, for acquiring the tank specifying information from said tank specifying information storing means (paragraph 27; teaching a system wherein an RFID reader receives the electronic signature from the RFID tag on each trailer); and

tank-side transmitting means attached to said tank, for transmitting said tank position information, warning time information, tank specifying information and remaining level warning information (paragraphs 68 and 400; teaching a system where “position reporting subsystems” transmit data messages including position and other messages including time, vehicle information, and weight of cargo); wherein,

said receiving means further receives said tank position information, warning time information, tank specifying information and remaining level information through said communication network (paragraph 40; teaching a “position-receiving subsystem which receives signals” contained aforementioned data such as time, vehicle information, and weight of cargo, and any other data transmitted by the electronic signature of the trailer, to include the described warning time information); and,

said outputting means further receives items of said tank position information, warning time information, tank specifying information and remaining level information through said communication network (paragraph 29; disclosing a computer system capable of outputting data and receiving data to and from “a remote communications network through a network interface”).

However, the Hsiao et al. and Tyhy et al. combination does not teach a system including a system further comprising a remaining level measuring means, for measuring the remaining level of the liquefied gas in the tank; remaining level warning information creating means attached to said tank, for creating remaining level warning information indicative of that said remaining level has become lower than a prescribed waning level; and a warning time information acquiring means attached to said tank, for acquiring warning time information which is a time when said remaining level warning information is created.

Dalrymple et al. teaches a system for measuring liquid for liquefied gases in a tank container wherein said system is attached to the tank and includes a remaining level measuring means attached to a tank, for measuring the remaining level of the liquefied gas in the tank (col. 1, lines 18 and 23-26; teaching that in regards to tanks filled with "liquefied gases," it is "known in the art to utilize various types" measuring means, attached to the tanks, to determine the remaining level of liquid);

remaining level warning information creating means attached to said tank, for creating remaining level warning information indicative of that said remaining level has become lower than a prescribed waning level (col. 9, lines 41-45; teaching a system wherein a "computer means is operatively connected to an alarm means to activate said alarm and provide a visual and/or audible warning when selected one of the level and quantity of material reaches a preselected level");

and a warning time information acquiring means attached to said tank, for acquiring warning time information which is a time when said remaining level warning

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information is created (col. 7, lines 35-36 and col. 9, lines 41-45; teaching the described attached measuring system which includes the ability to process and store the time measurement "received from the controller/processor" that activates the described warning system that is activated when the "level and quantity of material reaches a preselected level").

From this teaching of Dalrymple et al., it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the measurement and warning elements of Dalrymple et al. with the vehicle tracking ability of gas tanks of Hsiao et al. and Tyhy et al. in order to warn carriers of low levels of product in carrier tanks.

**As per claim 10**, as best understood, Hsiao et al. further teaches a system wherein said items of information transmitted from said transmitting means and said tank-side transmitting means are saved in a server of an application service provider communicated with said transmitting means and said tank-side transmitting means through a portable telephone packet communication network in a data quantity accounting system as said wireless communication network (paragraphs 68, 400, and 29; disclosing a system where "position reporting subsystems" transmit data messages including position and other messages including time, vehicle information, and weight of cargo to a computer system "located at a centralized office" capable of outputting data to a user interface and "a remote communications network through a network interface" to include telephone packet communication);

and said receiving means installed on said business place receives said items of information saved in said server using an internet (paragraph 29; disclosing a computer system "located at a centralized office" capable of outputting data to a user interface and "a remote communications network through a network interface" to include internet networks).

**9. Claims 12, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsiao et al. in view of Dalrymple et al.**

Hsiao et al. discloses a communication terminal device installed on a carrier vehicle (abstract; disclosing a "position tracking system" mounted on carrier vehicles) for providing a predetermined item of information on running of said carrier vehicle (abstract; disclosing a system that passes on position information as well as trailer information) to a business place to which a plurality of carrier vehicles for carrying a predetermined material good to a predetermined destination belong, comprising:

tank position information acquiring means (paragraphs 27-28; teaching a system wherein each trailer has an attached RFID tag to transmit the electronic signature via GPS signals);

tank specifying information storing means attached to said tank, for specifying tank specifying information used to specify one's own tank (paragraph 27; teaching a system wherein "each of the trailers contains an RFID tag providing a unique electronic identifier of the trailer);

tank specifying information acquiring means attached to said tank, for acquiring the tank specifying information from said tank specifying information storing means



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(paragraph 27; teaching a system wherein an RFID reader receives the electronic signature from the RFID tag on each trailer); and,

tank-side transmitting means for transmitting said tank position information, warning time information, tank specifying information and remaining level warning information to said business place through a predetermined communication network including a wireless line (paragraphs 68, 400, and 29; disclosing a system where "position reporting subsystems" transmit data messages including position and other messages including time, vehicle information, and weight of cargo to a computer system "located at a centralized office").

Hsiao et al. further teaches a tank position acquiring means for acquiring tank position on the basis of GPS signal (paragraph 33; disclosing a "mobile terminal unit" in place on tractor-trailers which "contains a GPS receiver, also referred to as a navigation system) but does not teach use of the GPS signal in response to remaining level warning information indicative of shortage of the liquefied gas in a tank.

Dalrymple et al. teaches a monitoring system having liquefied gas measurement device for signaling a remaining level warning information indicative of shortage of the liquefied gas in a tank (col. 9, lines 41-45; teaching a system wherein a "computer means is operatively connected to an alarm means to activate said alarm and provide a visual and/or audible warning when selected one of the level and quantity of material reaches a preselected level").

From this teaching of Dalrymple et al., it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the measurement

and warning elements of Dalrymple et al. with the vehicle tracking ability of Hsiao et al. in order to warn carriers of low levels of product in carrier tanks.

**10. Claims 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Hsiao et al. in view of Komatsu (Patent #5,305,214).**

**As per claim 13**, as best understood, Hsiao et al. discloses a system for assisting running management of a plurality of carrier vehicles (abstract; disclosing a system which provides position and trailer information for management purposes) which carry predetermined material goods to a predetermined destination, comprising:

position information acquiring means mounted on said carrier vehicle, for acquiring one's own vehicle position information on the basis of a GPS signal (paragraph 33; disclosing a "mobile terminal unit" in place on tractor-trailers which "contains a GPS receiver, also referred to as a navigation system);

time information acquiring means mounted on said carrier vehicle, for acquiring time information corresponding to said position information (paragraphs 68 and 72-73; disclosing a system including "position-reporting subsystems of the tractors" that can acquire and provide "real-time" "data messages" including specific times at which the tractors were involved in various tasks at certain locations);

vehicle specifying information storing means mounted on said carrier vehicle, for storing vehicle specifying information used to specify one's own vehicle (abstract, paragraph 57; disclosing a "unique electronic identifier" for each vehicle in a plurality of vehicles);

vehicle specifying information acquiring means mounted on said carrier vehicle, for acquiring the vehicle specifying information from said vehicle specifying storing means (abstract, paragraph 57; disclosing “an electronic identifier reader for acquiring the electronic identification of a trailer”);

loadage measuring means for measuring loadage of the material goods loaded on the carrier vehicle on the basis of load detected by a load sensor attached to a predetermined position of said carrier vehicle (paragraph 48; disclosing a system that includes “sensors that are mounted on the trailer body” that can be utilized to determine “the weight of the cargo” loaded in the carrier);

transmitting means mounted on said carrier vehicle, for transmitting said position information, time information, vehicle specifying information and loadage to a business place through a communication network inclusive of a wireless line (paragraphs 68 and 400 ; disclosing a system where “position reporting subsystems” transmit data messages including position and other messages including time, vehicle information, and weight of cargo);

receiving means installed on said business place to which the carrier vehicle belongs, for receiving said position information, time information, vehicle specifying information and loadage through said communication network (paragraph 40; teaching a “position-receiving subsystem which receives signals” contained aforementioned data such as time, vehicle information, and weight of cargo);

outputting means installed on said business place, for outputting said position information, time information, vehicle specifying information and loadage (paragraph 29;

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disclosing a computer system "located at a centralized office" capable of outputting data to a user interface and "a remote communications network through a network interface");

report issuing means for creating/issuing a report correlated with said running information and said loadage (paragraph 80; teaching a system including the ability wherein "by using linked records or the log file of the mobile-trailer database" users can request report detailing all aspects of measurements over time collected over time, including running information and loadage).

Hsiao et al. does not disclose a running information/collecting means mounted on said carrier vehicle, for collecting running information of one's own vehicle and for recording the running information in correlation with said loadage on a portable recording medium; and running information reading means installed on said business place, for reading said running information and loadage from said portable recording medium.

Komatsu teaches a digital tachograph system including a running information/collecting means mounted on said carrier vehicle, for collecting running information of one's own vehicle and for recording the running information in correlation with said loadage on a portable recording medium (col. 6, lines 45-50 and lines 53-55; teaching a "compact memory device that can be carried by hand" to which the tachograph data is written;

and running information reading means installed on said business place, for reading said running information and loadage from said portable recording medium

(lines 58-63; teaching a digital reader for retrieving the tachograph data written on the compact device).

From this teaching of Komatsu, it would have been obvious to one having ordinary skill in the art to combine the tracking system of Hsiao et al. with the digital tachograph system of Komatsu, in order to provide more information for tracking purposes.

**As per claim 14**, Hsiao et al. discloses the claimed invention but fails to disclose a running information/collecting means is a tachograph; and wherein said portable recording medium is a memory card having a security function.

Komatsu further teaches a running information system where the collecting means is a tachograph (col. 6, lines 45-48; disclosing a "digital tachograph" that "includes an axle rotation sensor"); and,

wherein said portable recording medium is a memory card having a security function (col. 10, lines 55-65; teaching a detachable memory card that is read to transmit data only to a proprietary readable device).

From this teaching of Komatsu, it would have been obvious to one having ordinary skill in the art to combine the tracking system of Hsiao et al. with the digital tachograph and memory card system of Komatsu, in order to provide more information for tracking purposes.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abraham J. Granderson whose telephone number is

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571-270-5098. The examiner can normally be reached on Monday through Thursday, 7:30 to 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynda Jasmin can be reached on 571-270-3033. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJG

/Lynda Jasmin/

Supervisory Patent Examiner, Art Unit 4127